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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,869	12/19/2001	Rene Jean Zimmer	DN2001205	3717

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The Goodyear Tire & Rubber Company
Patent & Trademark Department-D/823
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EXAMINER

MAKI, STEVEN D

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)
	10/024,869	ZIMMER ET AL.
	Examiner Steven D. Maki	Art Unit 1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-18 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-18 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) Interview Summary (PTO-413) Paper No(s). _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

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1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2) Claims 17 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 17, there is no antecedent basis for "the radially outer surface (S1)". In claim 17, it is suggested to change "the radially outer surface (S1)" to --the surface of the tape--.

Claim 18 ambiguously refers to "claims 17". In claim 18, it is suggested to change "claims 17" to --claim 16-- since the tire is already vulcanized in claim 17.

3) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

tread

4) **Claims 1-13 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohsawa (US 2001/0032691) and optionally Heinen '100 (GB 2363100) or Heinen '835 (US 6415835).**

Ohsawa discloses a tire having grooves wherein projections having a depth (height) of 0.01-0.5 mm are provided on the sidewalls of the groove. The projections reduce resistance to the flow of water in the grooves to improve drainage efficiency of the grooves. Since the pitch of the projections may be less than two times the depth,

the two sides of the projections may define an angle less than 90 degrees. See paragraph 27. Ohsawa prefers symmetrical projections but recognizes that asymmetrical projections may be used. See paragraph 23, figure 15 and figure 26. Ohsawa does not specifically recite defining an angle alpha of 5-60 degrees between the two sides of the projection when using asymmetrically shaped projections (one side longer than the other side).

As to claim 1 (tire), it would have been obvious to one of ordinary skill in the art to define an angle alpha of 5-60 degrees (a relatively small acute angle) between the two sides of the projection when using asymmetrically shaped projections in the tire of Ohsawa since (a) Ohsawa teaches using a pitch less than two times the depth so that the reduction of resistance to flow of water is high - a relatively small acute angle thereby being strongly suggested, (b) Ohsawa suggests that an asymmetrical cross section may be used as an alternative to a symmetrical cross section and optionally (c) Heinen '100 or Heinen '835 (also directed to reducing resistance to water flow in grooves of a tread) clearly suggests that an asymmetrical cross section may be used as an alternative to a symmetrical cross section (compare for example figures 3 and 4). Heinen '100 is available as prior art under 35 USC 102(a). Heinen '835 is available as prior art under 35 USC 102(e). The limitation of the tangent to the first side cutting the radially outer surface at an acute angle is suggested by the teaching from the above applied prior art to use an asymmetrical cross section for the projection.

As to claim 16 (mold), Ohsawa teaches using a vulcanizing mold. See for example paragraph 209. One of ordinary skill in the art would readily understand that

the mold has surfaces corresponding to the projections so that an actual tire having such projections can be vulcanized.

As to the dependent claims: As to claim 2, the claimed angle of 15-55 degrees would have been obvious since as noted above, Ohsawa teaches using a pitch less than two times the depth so that the reduction of resistance to flow of water is high - a relatively small acute angle thereby being strongly suggested. As to claim 3, the limitation of curved line apexes would have been obvious since Ohsawa suggests that the peaks of the projections may be curved (see e.g. figure 9). As to claim 4, note the teaching from the above applied prior art to use an asymmetrical cross section for the projection. As to claim 5, the claimed angle beta being between -15 degrees and +15 degrees would have been obvious in view of Ohsawa's suggestion to longitudinally orient the projections (an angle beta of 0 degrees thereby being defined). As to claim 6 (distance d being 0-100 micrometers), note the spacing of the projections disclosed by Ohsawa. As to claim 7, the limitation of the sides being slightly curved would have been obvious since Ohsawa suggests that the sides of the projections may be curved (see e.g. figure 9). As to claim 8, the claimed varying angle alpha would have been obvious in view of Ohsawa's suggestion to vary angle theta 1 (figure 15) so that the tire can easily be removed from the mold. As to claim 9, the claimed varying height would have been obvious since Ohsawa shows vary height (figure 15) so that the tire can easily be removed from the mold. As to claims 10-13, Ohsawa teaches providing the projections in a groove of a tread (e.g. on the sidewalls and bottom of a groove). As to claim 15, the description of "lettering" fails to require structure different from that disclosed in

Ohsawa. In figure 1 of Ohsawa, the projection forms the letter "I". As to claim 18 (vulcanizing tire), Ohsawa as noted above teaches using a vulcanizing mold to form the tire.

sidewall / tread

5) **Claims 1-8, 10-16 and 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Kemp (US 6253815) and optionally Ohsawa (US 2001/0032691).**

Kemp et al discloses a tire having asymmetrically shaped projections. See for example figure 8 or 10. The projections are provided in a groove or on a sidewall of the tire. See col. 4 lines 50-54. Kemp et al teaches that one side (the shorter side) may be inclined at an angle of substantially 90 degrees whereas the other side is inclined at a smaller angle so as to reflect a desired amount of light. See col. 5. As an example, Kemp et al teaches angles of 18 and 90 degrees for the sides (an angle of 72 degrees between the sides thereby being defined). The limitation of the sides defining an angle of 5-60 degrees therefore would have been obvious in view of Kemp et al's suggestion to incline one side at 90 degrees and the other side at an acute angle (e.g. 18 degrees) so as to reflect a desired amount of light; it being noted that figure 10 illustrates a projection having sides defining an acute angle of about 60 degrees. Kemp et al discloses an example height of 0.25 mm for the projection. See col. 5 lines 7-18). Kemp et al does not recite using a height of 1-100 micrometers (0.0002-0.1 mm) for the projection.

As to claim 1, it would have been obvious to one of ordinary skill in the art to use a height of 1-100 micrometers (0.0002-0.1 mm) such as 0.1 mm for the projection in

Kemp et al's tire since (a) Kemp et al suggests using a relatively small height of for example 0.25 mm for the projection and optionally (b) Ohsawa et al, also directed to the use of very small projections in a tire, suggests using a height of 0.01-0.5 mm for projections - 0.1 mm falling in this range - to reduce resistance to fluid flow.

As to the dependent claims: As to claim 2 (angle of 15-55 degrees), Kemp et al suggests using asymmetric projection having sides defining an acute angle. As to claim 3 (curved line apexes), see col. 4 lines 59-63 of Kemp et al. As to claim 4, note Kemp et al's suggestion to incline one side at an acute angle (e.g. alpha 161). As to claim 5, Kemp et al suggests orienting the length of the projections in the same direction - an angle beta of 0 degrees thereby being defined. As to claim 6, note the spacing of the projections shown by Kemp et al. As to claim 7, the limitation of the sides being slightly curved would have been obvious since Kemp et al teaches at col. 4 lines 55-63 that the projections do not have to have a perfect triangular cross section. As to claim 8, the claimed varying angle alpha would have been obvious in view of Kemp et al's teaching to vary the cross section of the projections (e.g. figure 17). As to claims 10-13 (tread), the limitations therein would have been obvious in view of (a) Kemp et al's suggestion to use the projections in a tread such as in a groove to create an optical effect and optionally (b) it is taken as well known / conventional per se to color the sidewalls and bottom of a groove (albeit with a "smooth" colored rubber layer) to improve the appearance of the groove. As to claims 14 and 15, Kemp et al discloses lettering on a sidewall of a tire comprising the projections.

As to claim 16 (mold), Kemp et al forms the projections using a mold. See col. 10 lines 25-35. As to claim 18, Kemp et al teaches curing (vulcanizing) the tires. Again see col. 10 lines 25-35.

6) **Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kemp (US 6253815) and optionally Ohsawa (US 2001/0032691) as applied above and further in view of Attinello et al (US 5645660).**

As to claim 9, it would have been obvious to one of ordinary skill in the art to use the claimed varying heights for the projections of Kemp et al since Attinello et al suggests using different heights for small projections on the sidewall of a tire so that if the tire scruffs a curb only the outermost ridges may be damaged.

7) **Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kemp (US 6253815) and optionally Ohsawa (US 2001/0032691) as applied above and further in view of Baker (US 5603796).**

As to claim 17, it would have been obvious to provide a tape with the projections of Kemp et al and adhere the tape to a vulcanized tire since (a) Kemp et al suggests using the projections, which are defined by corresponding recesses (e.g. asymmetric triangular recesses), in indicia on the sidewall of a tire, (b) Kemp et al suggests using known techniques to form the projections on the tire (col. 10 lines 25-35) and (c) Baker shows providing indicia defined by recesses on a sidewall of the tire by providing a tape (applique) having the recesses therein and bonding the tape (applique) to a tire before or after mounting the tire to a vehicle. In view of Baker's description of "before or after

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the tire 14 is mounted to a vehicle", one of ordinary skill in the art would readily understand that the tire is vulcanized when the tape (applique) is adhered thereto.

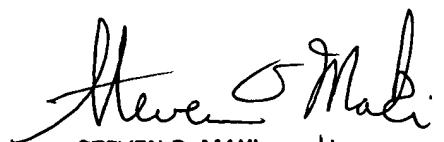
Remarks

- 8) The remaining references are of interest.
- 9) No claim is allowed.
- 10) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is 703-308-2068 until December 18 and (571) 273-1221 after December 18. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Steven D. Maki
November 14, 2003


STEVEN D. MAKI
PRIMARY EXAMINER
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AU 1733
11-14-03